10-Aug-2017

[redacted]
UA370 Testing

Re: Flint - [redacted]A370 Work Order: **1708227**

Dear [redacted]

ALS Environmental received 5 samples on 05-Aug-2017 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 11.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Rob Nieman

Electronically approved by: Chris Gibson

Rob Nieman
Project Manager

ALS Environmental

Date: 10-Aug-17

Client:
Project: Flint - [redacted] A370
Work Order: **1708227**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1708227-01	1-Grab Meter	Water		8/4/2017	8/5/2017	☐
1708227-02	2-Grab Water Heater	Water		8/4/2017	8/5/2017	☐
1708227-03	5-Sink Cold Water Grab	Water		8/4/2017	8/5/2017	☐
1708227-04	6-Hot Shower Grab	Water		8/4/2017	8/5/2017	☐
1708227-05	9-Grab Hall Sink	Water		8/4/2017	8/5/2017	☐

ALS Environmental

Date: 10-Aug-17

Client:
Project: Flint - [redacted] A370
Work Order: 1708227

Case Narrative

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

ALS Environmental

Date: *10-Aug-17*

Client:

Project: Flint - [redacted]A370 **Work Order:** 1708227

Sample ID: 1-Grab Meter **Lab ID:** 1708227-01

Collection Date: 8/4/2017 **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP			**SW6010B**		Prep Date: **8/9/2017**	Analyst: **SRL**
Copper	**0.33**		**0.025**	**mg/L**	1	8/9/2017 02:30 PM
Lead	**0.10**		**0.015**	**mg/L**	1	8/9/2017 02:30 PM

Note:

ALS Environmental

Date: *10-Aug-17*

Client:

Project: Flint - [redacted] A370 **Work Order:** 1708227

Sample ID: 2-Grab Water Heater **Lab ID:** 1708227-02

Collection Date: 8/4/2017 **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP			**SW6010B**		Prep Date: **8/9/2017**	Analyst: **SRL**
Copper	**0.48**		**0.025**	**mg/L**	1	8/9/2017 02:33 PM
Lead	**0.21**		**0.015**	**mg/L**	1	8/9/2017 02:33 PM

Note:

ALS Environmental

Date: *10-Aug-17*

Client:

Project: Flint - [redacted]A370

Work Order: 1708227

Sample ID: 5-Sink Cold Water Grab

Lab ID: 1708227-03

Collection Date: 8/4/2017

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP			**SW6010B**		Prep Date: **8/9/2017**	Analyst: **SRL**
Copper	**0.054**		**0.025**	**mg/L**	1	8/9/2017 02:36 PM
Lead	**0.051**		**0.015**	**mg/L**	1	8/9/2017 02:36 PM

Note:

ALS Environmental

Date: *10-Aug-17*

Client:

Project: Flint - [redacted]A370

Work Order: 1708227

Sample ID: 6-Hot Shower Grab

Lab ID: 1708227-04

Collection Date: 8/4/2017

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP			**SW6010B**		Prep Date: **8/9/2017**	Analyst: **SRL**
Copper	**0.026**		**0.025**	**mg/L**	1	8/9/2017 02:39 PM
Lead	ND		0.015	mg/L	1	8/9/2017 02:39 PM

Note:

ALS Environmental

Date: *10-Aug-17*

Client:

Project: Flint - [redacted]A370 **Work Order:** 1708227

Sample ID: 9-Grab Hall Sink **Lab ID:** 1708227-05

Collection Date: 8/4/2017 **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP			**SW6010B**		Prep Date: **8/9/2017**	Analyst: **SRL**
Copper	**0.22**		**0.025**	**mg/L**	1	8/9/2017 02:42 PM
Lead	ND		0.015	mg/L	1	8/9/2017 02:42 PM

Note:

ALS Environmental

Date: 10-Aug-17

Client:

QC BATCH REPORT

Work Order: 1708227

Project: Flint - [redacted] A370

Batch ID: **44948** Instrument ID **ICP3** Method: **SW6010B**

MBLK Sample ID: **mblk-44948-44948**

Units: **mg/L** Analysis Date: **8/9/2017 02:22 PM**

Client ID: Run ID: **ICP3_170809A** SeqNo: **1568951** Prep Date: **8/9/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	0.025								
Lead	ND	0.015								

LCS Sample ID: **lcs-44948-44948**

Units: **mg/L** Analysis Date: **8/9/2017 02:25 PM**

Client ID: Run ID: **ICP3_170809A** SeqNo: **1568952** Prep Date: **8/9/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	0.9986	0.025	1.1	0	90.8	80-120	0			
Lead	1.089	0.015	1.1	0	99	80-120	0			

LCSD Sample ID: **lcsd-44948-44948**

Units: **mg/L** Analysis Date: **8/9/2017 02:27 PM**

Client ID: Run ID: **ICP3_170809A** SeqNo: **1568953** Prep Date: **8/9/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	1.014	0.025	1.1	0	92.2	80-120	0.9986	1.5	20	
Lead	1.084	0.015	1.1	0	98.6	80-120	1.089	0.466	20	

MS Sample ID: **1708227-05a ms**

Units: **mg/L** Analysis Date: **8/9/2017 02:45 PM**

Client ID: **9-Grab Hall Sink** Run ID: **ICP3_170809A** SeqNo: **1568959** Prep Date: **8/9/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	1.202	0.025	1.1	0.2193	89.4	75-125	0			
Lead	1.061	0.015	1.1	0.01187	95.4	75-125	0			

MSD Sample ID: **1708227-05a msd**

Units: **mg/L** Analysis Date: **8/9/2017 02:48 PM**

Client ID: **9-Grab Hall Sink** Run ID: **ICP3_170809A** SeqNo: **1568960** Prep Date: **8/9/2017** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	1.192	0.025	1.1	0.2193	88.5	75-125	1.202	0.827	20	
Lead	1.058	0.015	1.1	0.01187	95.1	75-125	1.061	0.311	20	

The following samples were analyzed in this batch:

1708227-01a	1708227-02a	1708227-03a
1708227-04a	1708227-05a	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 10-Aug-17

Client:
Project: Flint - [redacted]
WorkOrder: 1708227

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
mg/L	

ALS Environmental

Sample Receipt Checklist

Client Name: Date/Time Received: **05-Aug-17 00:00**

Work Order: **1708227** Received by: **JNW**

Checklist completed by Chris Gibson 08-Aug-17 Reviewed by: Chris Gibson 08-Aug-17
eSignature Date eSignature Date

Matrices:
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: